

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

MAR 21 1997

In the Matter of

Amendment of the Commission's Rules to
Establish Part 27, the Wireless
Communications Service ("WCS")

GN Docket No. 96-228

DOCKETED FOR ORIGINAL

**OPPOSITION OF DIGITAL SATELLITE BROADCASTING
CORPORATION TO PETITION FOR EXPEDITED RECONSIDERATION**

Digital Satellite Broadcasting Corporation ("DSBC") opposes the Petition for Expedited Reconsideration ("Petition") of PACS Providers Forum ("PPF") and DigiVox Corporation ("DigiVox"). The Petition is based on facts and arguments previously presented to the Commission and offers insufficient support for the drastic relief it seeks. Accordingly, the Petition must be denied.

I. The Petition Fails To Satisfy The Standard For Reconsideration Of A Commission Rulemaking.

Under the Commission's Rules, a petition for reconsideration must "rel[y] on facts which have not previously been presented to the Commission," and must show that those facts either relate to events that have occurred since the last opportunity to address them, or were not timely presented because they were unknown to the petitioner and could not, with ordinary diligence, have been discovered.¹ These requirements clearly are not met here. Petitioners do not deny that their claims concerning out-of-band emission limits were extensively presented during the rulemaking process: in fact, their only

¹ 47 C.F.R. § 1.429(b)(1)-(2).

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complaint about the Commission's Report and Order is that it allegedly failed to take this extensive factual record into account.² The resubmission of facts and arguments previously presented to and fully considered by the Commission cannot support a petition for reconsideration.

Petitioners' failure to present new facts, in itself, requires denial of the Petition. Even if the Commission chooses to consider the merits of Petitioners' arguments, however, it must find that the relief sought is not supported by the record and would not serve the public interest.

II. The Broad Relief Requested Is Contrary To The Public Interest.

The out-of-band emission limits adopted in the Commission's Order are designed -- as they must be -- to accommodate a range of possible systems and service configurations that may be created by vendors of WCS services in the future. Petitioners, however, demand that the Commission change technical rules of general application to accommodate only one of several possible uses of the spectrum -- *i.e.*, PACS service employing a mobile pulsed transmitter at a 12.5% duty cycle, using a specific polarization, without vehicle-mounted mobile terminals and meeting other, specific parameters peculiar to Petitioners' proposed service.³ If the requested relief is granted the Commission's rules concerning technical interference between services will be based on the specific parameters of Petitioners' proposed service, and no longer will offer adequate

² The Petition argues, not that the Commission must consider new facts not previously presented, but that the Commission failed to consider extensive factual submissions already made during the rulemaking process -- *i.e.*, "*ex parte* filings [that] clearly demonstrated that the out-of-band emission limits are unnecessarily restrictive . . ." Petition at 6. Similarly, the principal technical analysis appended to the Petition had been placed in the record in previous, *ex parte* presentations made during the rulemaking proceeding.

³ It should be emphasized that the Petition only describes a proposed service. Complete characteristics of the system are not available, no FCC application for the service has been filed and no license has been granted.

interference protection where mobile WCS systems operate in ways that differ from the system described in the Petition.

The Commission does not and cannot develop technical rules in this way. If the PACS providers and DigiVox can demonstrate that their specific system will not cause harmful interference to Digital Audio Radio Service (“DARS”) receivers -- as they so far have failed to do -- then they may seek a waiver of the Commission’s rules limited to their specific technology and the interference environment created by their service.⁴ Attempting to change general rules at this late date, based on a filing made outside the comment and reply cycle and describing a particular proposed system, is entirely inappropriate.

III. Petitioners’ Technical Study Is Inaccurate And Cannot Support The Requested Relief.

The technical analysis offered in support of the Petition is exactly the same analysis submitted by Petitioners in an *ex parte* presentation in the course of the rulemaking and considered by the FCC in adopting its rules. That analysis is based on invalid assumptions and therefore provides no basis for changing the out-of-band emission limits.⁵ Specifically:

1. The analysis assumes that the separation distance between PACS and DARS antennas will be a minimum of 12 feet because PACS terminals will not be mounted in vehicles. This ignores the very high probability that handheld PACS terminals will be operated in vehicles, and that antenna separations between

⁴ Petitioners acknowledge that providers of their proposed service may seek waivers of the out-of-band emission rules; but they assert, without explanation, that the waiver process is “far too risky and tenuous . . .” Petition, n. 2 at 3.

⁵ Unfortunately, two attachments to the Petition are entitled “Exhibit A.” The technical analysis referred to here is the 1/27/97 letter from Hughes Network Systems to DigiVox Corp.

adjacent vehicles of considerably less than 12 feet will occur as vehicles proceed in traffic alongside each other.

2. The analysis averages the interference caused by PACS pulsed transmissions. This assumption is invalid because these pulses could cause repetitive spikes of interference at the peak level that will be quite harmful to perceived audio quality.
3. The analysis assumes a 5 dB loss due to blockage by a human head. There is no basis for assuming that a human head will always intervene between the PACS and SDARS antennas. In fact, the PACS antenna will always transmit in the direction away from the user's head. Only about 50 percent of the time will a human head intervene on the path between the DARS and PACS antennas.
4. The analysis assumes a polarization loss of 3 dB because the PACS antenna will employ linear vertical polarization and the DARS antenna will be circularly polarized at user elevation angles (30° to 55° for CONUS). It has been shown that circularly polarized GPS planar antennas (which resemble those to be used for DARS) mounted on a ground plane, such as an automobile roof or trunk deck, will exhibit almost vertical linear polarization at the low elevation angles anticipated between the two terrestrial antennas.⁶
5. The analysis assumes that in the horizontal direction the SDARS antenna gain will be 6 dB below the peak gain of 3 dB. No citation is provided to support this assumption, nor does anything in the record support it. In fact, test results indicate that the vertically polarized gain at the horizon can, in some cases, be only 2 dB below the circularly polarized gain in the direction of the desired transmitter.⁷

⁶ Colby *et al.*, "Test Results of the Joint FAA/DOD Investigation of GPA Interference," ION '96 Proceedings ("FAA/DOD Study").

⁷ *FAA/DOD Study, supra.*

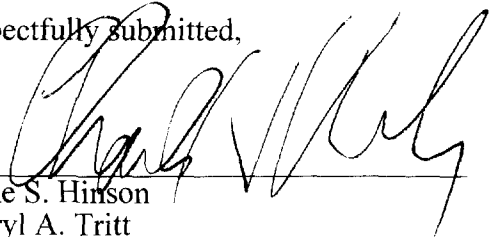
6. Petitioners make several assumptions concerning sky noise, filter insertion loss and post-LNA contributions to the noise floor of the DARS receiver. These are statements of opinion, contradicted in the record, as to which reasonable experts will differ. Until equipment is built and tested, the Commission has no reason to rely on one such opinion in preference to any other.

Because the assumptions in the Petitioners' technical analysis are contrary to fact, the conclusions reached in the study are unreliable and cannot support the requested, drastic liberalization of the out-of-band emission rules.

CONCLUSION

The out-of-band emission rules for WCS were developed on an ample record and are appropriately designed to give WCS licensees flexibility in their service offerings, consistent with the need to protect sensitive operations on adjacent frequencies. Petitioners have not presented new facts or offered a technical analysis that justifies the drastic changes they demand. Accordingly, the Commission's rules should stand and the petition for reconsideration should be denied.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I, Kimberly E. Thomas, do hereby certify that the foregoing **OPPOSITION OF DIGITAL SATELLITE BROADCASTING CORPORATION TO PETITION FOR EXPEDITED RECONSIDERATION** was hand delivered on this 21st day of March, 1997 to the following:

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